

Remarks

The Office Action dated September 26, 2005 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-48 are pending in this application. Claims 1-48 stand rejected.

In accordance with 37 C.F.R. 1.136(a), a one month extension of time is submitted herewith to extend the due date of the response to the Office Action dated September 26, 2005, for the above-identified patent application from December 26, 2005, through and including January 26, 2006. In accordance with 37 C.F.R. 1.17(a), authorization to charge a deposit account in the amount of \$120.00 to cover this extension of time request also is submitted herewith.

Claims 1-2, 9-11, 17-18, 25-27, 33-34, and 41-43 are rejected under 35 U.S.C. §102 (e) as being anticipated by Mowery et al. (US Pat. No. 5,983,198) is respectfully traversed.

In contrast to the methods of tracking and predicting the capacity utilization of a goods delivery system described and claimed in the present application, Mowery et al. describe an inventory control method that monitors product level in customer storage tanks (104) and a delivery scheduling method that utilizes the monitored tank level data. The timing of the delivery is determined by the forecasted usage of material in the tank; the available capacities of neighboring tanks; that a delivery can be made whenever the tank level is in the "delivery zone" (i.e., the amount of material is between the minimum inventory level and the maximum order level, see Figure 4); and that a delivery will be made before the tank level reaches the minimum inventory level. Also, the amount of delivery is determined by the available tank capacity; minimum delivery amount for the tank; the maximum delivery amount for the tank; and the

available capacities of neighboring tanks (see Col. 9, lines 14-24). In addition, Mowery et al. describe historical/forecasting software that compares the historical usage with previous patterns, and automatically notifies customers these variations (see Col. 8, lines 35-40).

The inventory control method of Mowery et al. is completely different from the methods of tracking and predicting the capacity utilization of a goods delivery system described and claimed in the present application. Particularly, the Mowery et al. method is directed to monitoring the customer tanks that receive the delivery of chemicals and developing delivery schedules from the amount of material the customer has in inventory. In contrast, the methods of tracking and predicting the capacity utilization of a goods delivery system of the present application are directed to determining the capacity and usage of delivery trucks that deliver goods, for example, appliances such as refrigerators, washers, and dryers, to customers that have purchased the goods from a dealer. Applicants respectfully submit that the teachings of Mowery et al. do not, even remotely, describe or teach the methods claimed in the present application.

Applicant respectfully submits that the Section 102 rejection of the presently pending claims is not a proper rejection. The Federal Circuit has opined that to anticipate a claim, a single source must contain all of the elements of the claim. See *Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 137, 1379, 231 U.S.P.Q. 81, 90 (Fed. Cir. 1986). Also, missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. See *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Applicant submit that Mowery et al. do not contain any elements of the independent claims of the present application.

Particularly, Applicant submits that Mowery et al. do not describe nor suggest a method as recited in Claim 1. Specifically, Mowery et al. do not describe nor suggest a method that includes the step of defining a delivery agent capacity utilization matrix for each delivery agent for a specific delivery zone, where the delivery agent capacity utilization matrix comprises the number of delivery vehicle slots that the delivery agent has for use in the delivery zone, including the number of delivery vehicle slots for each zip group in the delivery zone, and where the total number of vehicle delivery slots in the zone define a zone delivery capacity of the delivery agent. Rather, in contrast to the present invention, Mowery et al. describe an inventory control method that monitors product level in customer storage tanks and a delivery scheduling method that utilizes the monitored tank level data. Moreover, Mowery et al. do not describe nor suggest a zone delivery capacity of the delivery agent, but rather, the delivery schedule of Mowery et al. is based on the capacity of the tanks to receive product, not on the capacity of the delivery agent to deliver product. Specifically, Mowery et al. do not describe nor suggest a delivery agent capacity utilization matrix that includes the number of delivery vehicle slots that the delivery agent has for use in the delivery zone, including the number of delivery vehicle slots for each zip group in the delivery zone. Additionally, Mowery et al. do not describe nor suggest delivery vehicle slots that are defined as a portion of a delivery vehicle used to deliver a good. The Office Action, at page 18, suggests that "[w]hile Mowery et al. does not specifically contain the word slot, Mowery et al. discloses the analogous concept of scheduled portions within the tank of the truck that are assigned to a specific delivery. See column 9, lines 10-25, which discusses utilized capacities/portions of trucks." Applicants disagree with this assertion because Mowery et al. do not describe nor suggest the use of a portion of a truck for a delivery in lines

10-25 of Col. 9. Specifically, Mowery et al describe at Col. 9, lines 10-25 that "[t]he timing of a delivery is determined by . . . available capacities/usages of neighboring tanks/truck availability and utilization [t]he amount of the delivery is determined by . . . available capacities of neighboring tanks/BTC truck utilization." Applicants submit that there is no mention of utilizing a portion of a truck for a delivery, only a vague mention of truck availability and utilization.

The Examiner has directed Applicant to Col. 7, lines 13-30 and 40-46 of Mowery et al. to show where Mowery et al. describe this method step. However, Applicant submits that Col. 7, lines 13-30 and 40-46 describe the optimization of truck routes, delivery amounts, and delivery schedule for each vehicle "based on the projected future tank quantities and the possible routes". Also Mowery et al teaches that "the processor optimizes routes, delivery amounts, and delivery schedule based on the projected future tank levels and the possible routes". There is no teaching in Mowery et al. as to a delivery agent capacity utilization matrix that includes the number of delivery vehicle slots that the delivery agent has for use in the delivery zone, including the number of delivery vehicle slots for each zip group in the delivery zone. Further, the Examiner has directed Applicant to Col. 8, lines 40-46 and Col. 9, lines 1-25, where Mowery et al. again describe figuring inventory levels in customer tanks and scheduling delivery to the tank based on the amount of material is in the tank. There is no discussion or teaching of developing a delivery agent capacity utilization matrix based on the delivery vehicle slots of the delivery agents vehicles.

Moreover, Mowery et al. do not describe nor suggest the steps of determining a respective zone maximum number of delivery vehicle slots and a respective number of used delivery vehicle slots for a specified period of time within the respective delivery zone and

updating the respective delivery agent capacity utilization matrix for the specified period after the respective order has been included within said respective number of used delivery vehicle slots. Rather, Mowery et al. describe an algorithm that calculates the tank material usage and an associated amount needed to keep the amount of material in the tank above a minimum inventory level L1.

The Office Action suggests at pages 3-4 that Mowery et al describe the step of determining a respective zone maximum of delivery vehicle slots and a respective number of used delivery vehicle slots for a specified period of time within the respective delivery zone. The Office Action suggests that Mowery et al. describe that a group of neighboring customers are in a delivery zone and that "each customer's tank has a maximum so the zone has a maximum for delivery". "This maximum (and the ability of a customer to accept delivery) determines how much good is put in the capacity of the delivery agent vehicle." Applicants respectfully submit that the maximum amount of goods a customer's tank can hold has nothing to do with the zone maximum number of delivery vehicle slots. A delivery agent has a plurality of delivery vehicles with each having a plurality of vehicle delivery slots so the zone maximum number of delivery slots can be much larger than the maximum amount that a Mowery et al. described customer's tank can hold. Further, there can be more than one delivery agent operating in a delivery zone which also has a zone maximum number of delivery slots. Applicants submit that the maximum amount of goods that a customer's tank can receive is not determinative of the zone maximum number of delivery slots for each delivery agent. Mowery et al. is silent as to the number of delivery vehicle slots present in a delivery agent's trucks. The system of Mowery et al. is only

based on the capacity of the tanks where the product is to be delivered, the historical usage of each tank, and the minimum level allowable in each tank to sustain production at the plant.

Further, the Office Action suggests, at page 19, that Mowery et al. teaches "updating the respective capacity utilization matrix for the above specified period after the respective order has been included within said respective number of used slots. See figure 5, column 3, lines 50-55 column 4, lines 1-45 and 56-61, column 5, lines 30-50, column 7, lines 15-33, and column 9, lines 1-13, wherein the central system is updated to reflect the delivery of the goods and the respective number of slots (levels) of capacity delivered and utilized in a period." Applicant respectfully disagrees with this suggestion because Mowery et al. do not describe nor suggest a delivery agent capacity utilization matrix that includes the number of delivery vehicle slots that the delivery agent has for use in the delivery zone, including the number of delivery vehicle slots for each zip group in the delivery zone, and where the total number of vehicle delivery slots in the zone define a zone delivery capacity of the delivery agent, wherein each delivery vehicle slot is defined as a portion of a delivery vehicle used to deliver a good. Mowery et al. only teach the maximum capacity **of the tanks to receive delivery**.

Moreover, Mowery et al. do not describe nor suggest a delivery capacity of the delivery agent. For example, Mowery et al. do not take into account in their system the situation of when the delivery agent has the capacity to deliver two times the amount that the plurality of tanks in the delivery agent's delivery zone can receive. The delivery schedule of Mowery et al. is based on the capacity of the tanks to receive product, not on the capacity of the delivery agent to deliver product.

Accordingly, for at least the reasons set forth above, Claim 1 is submitted to be patentable over Mowery et al.

Claims 2 and 9-11 depend from independent Claim 1. When the recitations of dependent Claims 2 and 9-11 are considered in combination with the recitations of Claim 1, Applicant submits that Claims 2 and 9-11 likewise are patentable over Mowery et al.

Mowery et al. do not describe nor suggest a computer process as recited in Claim 17 of the present application. Particularly, and at least for the reasons explained above, Mowery et al. do not describe nor suggest a method that includes the step of defining a delivery agent capacity utilization matrix for each delivery agent for a specific delivery zone, where the delivery agent capacity utilization matrix comprises the number of delivery vehicle slots that the delivery agent has for use in the delivery zone, including the number of delivery vehicle slots for each zip group in the delivery zone, and where the total number of vehicle delivery slots in the zone define a zone delivery capacity of the delivery agent, determining a respective zone maximum number of delivery vehicle slots and a respective number of used delivery vehicle slots for a specified period of time within the respective delivery zone, and updating the respective delivery agent capacity utilization matrix for the specified period after the respective order has been included within said respective number of used delivery vehicle slots. Accordingly, Applicant submits that Claim 17 is patentable over Mowery et al.

Claims 18, and 25-27 depend from independent Claim 17. When the recitations of dependent Claims 18, and 25-27 are considered in combination with the recitations of Claim 17, Applicant respectfully submits that Claims 18, and 25-27 likewise are patentable over Mowery et al.

Mowery et al. do not describe nor suggest a method as recited in Claim 33. Particularly, and for the reasons explained above, Mowery et al. do not describe nor suggest a method that includes the step of defining a delivery agent capacity utilization matrix for each delivery agent for a specific delivery zone, where the delivery agent capacity utilization matrix comprises the number of delivery vehicle slots that the delivery agent has for use in the delivery zone, including the number of delivery vehicle slots for each zip group in the delivery zone, and where the total number of vehicle delivery slots in the zone define a zone delivery capacity of the delivery agent, determining a respective zone maximum number of delivery vehicle slots and a respective number of used delivery vehicle slots for a specified period of time within the respective delivery zone, and updating the respective delivery agent capacity utilization matrix for the specified period after the respective order has been included within said respective number of used delivery vehicle slots. Accordingly, Applicant submits that Claim 33 is patentable over Mowery et al.

Claim 34 depends from independent Claim 33. When the recitations of dependent Claim 34 are considered in combination with the recitations of Claim 33, Applicant respectfully submits that Claim 34 likewise is patentable over Mowery et al.

Claim 41 recites a method of predicting the capacity utilization of a goods delivery system, "the system having at least one delivery zone comprising at least one zip group, each delivery zone having a capacity utilization matrix comprising a number of delivery vehicle slots that a delivery agent has for use in the delivery zone, including a number of delivery vehicle slots for each zip group in the delivery zone, the total number of vehicle delivery slots in the zone defining a zone delivery capacity of the delivery agent, each delivery vehicle slot having an

associated workload value, said method of predicting the capacity utilization comprising the steps of: predicting the probability of a future respective used delivery vehicle slot being full based on historical over capacity conditions...predicting whether the trend line of the capacity utilization is changing".

Mowery et al. do not describe nor suggest a method as recited in Claim 41. More specifically, Mowery et al. do not describe nor suggest a method that includes the steps of predicting the probability of a future respective used delivery vehicle slot being full based on historical over capacity conditions, and predicting whether the trend line of the capacity utilization is changing. Rather, in contrast to the present invention, Mowery et al. describe software that **predicts future material usage in customer storage tanks**, i.e., the available capacity of the tank, based on the historical tank material usage. Applicant submits that Mowery et al. base all their teachings on the measurement and capacity of the customer's tank and does not teach anything about a goods delivery system delivery agent capacity utilization matrix based on the delivery vehicle slots. Further, Mowery et al. do not describe nor suggest predicting whether the trend line of the capacity utilization is changing. Rather, the historical/forecasting software described by Mowery et al. merely compares the historical usage with previous patterns. Notably, if the historical/forecasting software detects the difference, the software only notifies the customers instead of predicting the trend line. Accordingly, for at least the reasons set forth above, Claim 41 is submitted to be patentable over Mowery et al.

Claims 42 and 43 depend from independent Claim 41. When the recitations of Claims 42 and 43 are considered in combination with the recitations of Claim 41, Applicant submits that dependent Claims 42 and 43 likewise are patentable over Mowery et al.

For the reasons set forth above, Applicant respectfully requests that the Section 102(e) rejection of Claims 1, 2, 9-11, 17-18, 25-27, 33-34, and 41-43 be withdrawn.

The rejection of Claim 3-8, 12-16, 19-24, 28-32, 35-40, and 44-48 under 35 U.S.C. § 103(a) as being unpatentable over Mowery is respectfully traversed.

At least for the reasons explained above, Applicant submits that independent Claims 1, 17, 33, and 41 are patentable over Mowery et al.

Claims 3-8 and 12-16 depend from independent Claim 1, Claims 19-24 and 28-32 depend from independent Claim 17, Claims 35-40 depend from independent Claim 33, and Claims 44-48 depend from independent Claim 41. When the recitations of dependent Claims 3-8 and 12-16, dependent Claims 19-24 and 28-32, dependent Claims 35-40, and dependent Claims 44-48 are considered in combination with the recitations of Claims 1, 17, 33, and 41 respectively, Applicant respectfully submits that Claims 3-8, 12-16, 19-24, 35-40, and 44-48 likewise are patentable over Mowery et al.

For the reasons set forth above, Applicant respectfully requests that the Section 103(a) rejection of Claims 3-8, 12-16, 19-24, 28-32, 35-40, and 44-48 be withdrawn.

In view of the foregoing amendments and remarks, all the claims now active in this

application are believed to be in condition for allowance. Favorable action is respectfully solicited.

Respectfully submitted,

A handwritten signature in cursive script, reading "Michael Tersillo". The signature is written in dark ink and is positioned above a horizontal line.

Michael Tersillo
Registration No. 42,180
ARMSTRONG TEASDALE LLP
One Metropolitan Square, Suite 2600
St. Louis, Missouri 63102-2740
(314) 621-5070